

Northeast Coastal and Barrier Network
Protocol Development Summary
(Sept. 2005)

Protocol: Visitor Impacts

Parks Where Protocol will be Implemented: ASIS, CACO, COLO, FIIS, GATE, GEWA, SAHI and THST

Justification/Issues being addressed: High visitation within NCBN parks creates the potential for significant and widespread impacts to natural resources and processes. As recreation is a legitimate use of parks, the issue for managers is at what level do resource impacts become unacceptable based on park management mandates and objectives. Visitor impacts frequently occur at initial or low levels of use, and result in substantial resource changes in localized areas (Hammitt & Cole 1998). Such impacts can decrease the functionality of facilities like trails and recreation sites, increase safety concerns, reduce aesthetic enjoyment and contribute to visitor displacement, create conflict between visitor groups, and increase management costs (Marion and Farrell 1998).

“Providing opportunities for public enjoyment is an important part of the Service’s mission; but recreational activities and other uses may be allowed in parks only to the extent they can take place without causing impairment or derogation of a park’s resources, values, or purposes.” (NPS, 2001). This statement, from the 2001 NPS Management Policies, guides recreation management decisions in protecting park resources and values. Such guidance recognizes the legitimacy of providing opportunities for public enjoyment of parks, however, natural resource degradation is an inevitable consequence of visitation. Even the most thoughtful visitors leave footprints and unintentionally disturb wildlife. Park managers must therefore be willing to accept some degree of resource degradation from recreational activities, even within natural zones where resource protection is the paramount management objective. The NPS Management Policies acknowledge such impact and directs managers to “ensure that any adverse impacts are the minimum necessary, unavoidable, cannot be further mitigated, and do not constitute impairment or derogation of park resources and values.” (NPS, 2001). Excessive resource degradation and the proliferation of user-created trails, recreation sites or unnecessary wildlife disturbance are viewed as unacceptable (Marion and Cahill 2003; Monz and Leung 2003a-b).

Monitoring Goals, Questions and Objectives to be Addressed by the Protocol:

NCBN Goal:

Provide information to NCBN park managers on visitor impacts to park natural resources that will lead to improved knowledge and management of these resources and the prediction and prevention of further impacts.

Monitoring Questions:

What are the management areas of critical concern where current or potential visitor activities threaten resource quality and compromise resource protection objectives?

In areas of critical concern, what is the type and extent of visitor impacts to soil, vegetation and wildlife resources and how are these impacts changing over time?

Monitoring Objective:

Monitoring objectives have not been determined.

Vital Sign:

Visitor Impacts

Justification:

The visitor impact vital sign is associated with direct impacts to park landscapes that are associated with park use and can also be quantitatively measured and mapped. These measurements will allow for a quantifiable link between park use and resource impacts and allow for the tracking of trends in these impacts over time. The monitoring goal is to assist park managers in making decisions regarding resource protection and sustainable park use.

Basic Approach for all Vital Signs:

Methods for monitoring visitor impacts to park natural resources have not yet been determined for the Network. Some methods have been presented in a report by Dr. Jeff Marion, to Cape Cod National Seashore that include using aerial photographs to monitor the extent and distribution of social trails (Marion and Cahill 2003). Trails are identified and further classified based on their condition. Other methods described include using GPS to map park trails and field methods for classifying soil and vegetation disturbance.

Specific methods will be developed by the Network as part of the complete protocol development phase scheduled to occur in 2006-2007.

Principal Investigators and NPS Lead:

The project scoping has been completed through a cooperative agreement with Sterling College, principal investigator Christopher Monz.

The NPS leads: Bryan Milstead, Sara Stevens and Marc Albert,

Development Schedule, Budget, and Expected Interim Products:

Two scoping reports were produced and served as the basis for vital signs selection. The next phase of the project will be to establish a small workgroup to develop a scope of work for protocol development. In November 2005 the Technical Steering Committee will further discuss the development of this protocol. The Network budgeted \$58,000 in FY 2003 and \$37,000 in FY 2004.

Literature Cited:

Marion, J.L. and K. Cahill. 2003. Design and Testing of Protocols for Monitoring Visitor Use and Resource Impacts at Cape Cod National Seashore. Unpublished report. Cape Cod National Seashore, MA.

- Monz C. and Y. Leung. 2003a. Phase 1 Project Report, National Park Service Coastal Visitor Impact Monitoring.
- Monz C. and Y. Leung. 2003b. Phase 2 Project Report, National Park Service Coastal Visitor Impact Monitoring.
- National Park Service (NPS) 2001a. Management policies. Washington DC: National Park Service Report NPS D1416 137 p.